

DETAILED ACTION

Allowable Subject Matter

1. Claims 41-54, 56-67 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding **claim 41, Tang 6,799,046** discloses gathering a sequence of cellular network events related to one or more mobile units (dividing a cell into multiple sections and measuring the signal strength at each section location, see figs. 3-5, col. 4, lines 26-44), and a physical, geographically-defined, accurate location of each mobile unit determined by a physical geographically-defined, accurate location determination system when each cellular network event occurs (measuring the RSSI and recording the location information associated with the RSSI, see figs. 3-5, col. 4, lines 26-44 and 61-67, col. 5, lines 1-19), such cellular network events and physical, geographically-defined accurate locations being gathered during one or more drives and then stored as entries in a learnt database as a location reference (measuring the RSSI and recording the RSSI and the location associated with the measured RSSI in a profile database, see figs. 3-5, col. 4, lines 26-44 and 61-67, col. 5, lines 1-19). The instant invention discloses a method for correlating a vehicle with the road on which it travels based on cellular communication, the method comprising the steps of: gathering a sequence of cellular network events related to one or more mobile units, and a physical, geographically-defined, accurate location of each mobile unit determined by a physical geographically-defined, accurate location determination system when each cellular network event occurs, such cellular network events

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and physical, geographically-defined accurate locations being gathered during one or more drives and then stored as entries in a learnt database as a location reference; and conducting analysis of a new sequence of cellular network events related to a particular mobile unit, the new sequence of cellular network activity events being gathered during a new drive and is independent of physical, geographically-defined location information, in conjunction with the learnt database to correlate the new sequence of cellular network events to a physical geographic location; whereas the new sequence of cellular network events is extrinsically collected from the base stations or the controllers or main switching systems or communication links between them and whereas the new sequence of cellular network events is processed to overcome the problem of similar sequences for neighboring routes. The above novel features are neither taught, suggested, nor made obvious by Tang or any other prior art of record. Claims 42-52, 54, 56-62 and 64-67 are allowable by virtue of their dependency on claim 41.

Regarding **claim 53, Tang 6,799,046** discloses a method correlating a vehicle on a road on which it travels based on cellular communication, the method comprising: gathering a sequence of cellular network events related to one or more mobile units, and a physical, geographically defined, accurate location of each mobile unit determined by a physical geographically-defined, accurate location determination system when each cellular network event occurs, such cellular network events and physical, geographically-defined accurate locations being gathered during one or more drives and then stored as entries into a learnt database as location references; and conducting analysis of a new

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sequence of cellular network events related to a particular mobile unit, the new sequence of cellular network activity events being gathered during a new drive and is independent of the physical, geographically-defined location information, in conjunction with the learnt database to correlate the new sequence of cellular network events to a physical geographic location; conducting analysis of a new sequence of cellular network events related to a particular mobile unit, the new sequence of cellular network activity events being gathered during a new drive and is independent of physical, geographically-defined location information, in conjunction with the learnt database to correlate the new sequence of cellular network events to a physical geographic location. The instant invention a method correlating a vehicle on a road on which it travels based on cellular communication, the method comprising: gathering a sequence of cellular network events related to one or more mobile units, and a physical, geographically defined, accurate location of each mobile unit determined by a physical geographically-defined, accurate location determination system when each cellular network event occurs, such cellular network events and physical, geographically-defined accurate locations being gathered during one or more drives and then stored as entries into a learnt database as location references; and conducting analysis of a new sequence of cellular network events related to a particular mobile unit, the new sequence of cellular network activity events being gathered during a new drive and is independent of the physical, geographically-defined location information, in conjunction with the learnt database to correlate the new sequence of cellular network events to a physical

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geographic location; conducting analysis of a new sequence of cellular network events related to a particular mobile unit, the new sequence of cellular network activity events being gathered during a new drive and is independent of physical, geographically-defined location information, in conjunction with the learnt database to correlate the new sequence of cellular network events to a physical geographic location discloses whereas the new sequence of cellular network events is extrinsically collected from the base stations or the controllers or main switching systems or communication links between them and whereas the new sequence of cellular network events is processed to overcome the problem of similar sequences for neighboring routes; and wherein the step of conducting analysis further comprises: matching chains from new drives to the learnt database by searching for a chain of J cells that has at least K ($K=J$) cells that appear in the same order, both in a chain from the new drive as well as in a chain from the learnt database, whereas J and K may vary for different route sections; and assigning the route of the chain from the learnt database to the new chain that was matched. The above novel features in combination with other limitations of claim 53 are neither taught, suggested, nor made obvious by Bahl or any other prior art of record.

Regarding **claim 63**, **Tang 6,799,046** discloses collecting handover sequences statistics for a relevant area. The instant invention discloses a method for correlating a vehicle with the road it travels on based on cellular communication, the method comprising the steps of: collecting handover sequences statistics for a relevant area; collecting road traffic volume information

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for each route in the relevant area from external sources for roads that differ in traffic conditions; assigning handover sequences to routes according to volume comparison analysis; and conducting analysis of new handover sequences from new drives in the relevant area in conjunction with the previously collected handover and traffic volume information to identify a route at certain time points during cellular phone calls.

The above novel features are neither taught, suggested, nor made obvious by Tang or any other prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Garceran et al 6,522,888 discloses a system for wireless coverage using location information for a wireless unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUMIDE T. AJIBADE AKONAI whose telephone number is (571)272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OA

/Charles N. Appiah/
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